



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/804,768	03/19/2004	Chih-Ming Tsai	TSAI27.002AUS	7783
20995	7590	03/27/2006	EXAMINER	
KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			KING, JUSTIN	
			ART UNIT	PAPER NUMBER
			2111	

DATE MAILED: 03/27/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/804,768	Applicant(s) TSAI, CHIH-MING	
	Examiner Justin I. King	Art Unit 2111	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Abramson (U.S. Patent No. 5,951,667).

Referring to claim 1: Abramson discloses a bus interface extender (figure 5, structure arbiter) with a plurality of second pins (figure 5, structure arbiter's connectors connecting to BM IDE controller, USB host controller, and ISA arbiter controller), and at least one third pin (figure 5, structure arbiter's connector connecting to the structure PCI arbiter), wherein the at least one third pin is electrically coupled to a corresponding one of the first pins of the bus arbitrator (figure 5, structure PCI arbiter's connector connecting to the structure arbiter), and each of the second pins can be electrically coupled to a corresponding second bus device (figure 5, structures BM IDE controller, USB host controller, and ISA arbiter controller), so the bus interface extender arbitrates each request signal sent by each second bus device through the second pins asking for use of a bus channel, according to a first grant signal, that allows the use of the bus channel and is produced after arbitrating by the bus arbitrator and received by the bus interface extender through the at least one third pin. Hence, the claim is anticipated by Abramson.

Referring to claim 2: Abramson discloses a priority decision module (column 7, lines 20-

29 and 38-44, figure 6) for determining a priority sequence in using the bus channel for each second bus device according to a priority decision rule, a grant decision module (column 7, lines 20-29 and 38-44) for deciding one of the second bus devices with the highest priority according to the priority decision rule and confirming whether the second bus device with the highest priority is in request status (column 7, lines 50-54), and a bus signal processing module (column 5, lines 50-53) for correspondingly sending a second grant signal to a proper one of the second bus device according to the first grant signal and a decision result decided by the grant decision module to form signal transmission between the proper one of the second bus device and a system bus.

Referring to claim 3: Abramson discloses that the arbiter uses a priority state machine (figure 6) and Abramson discloses that the expansion bus arbiter moves between the states (column 7, lines 45-48). Thus, Abramson discloses using a fixed-priority arbitration mode.

Referring to claim 4: Abramson's state machine is round-robin.

Referring to claim 5: Abramson discloses the PCI protocol.

Referring to claim 6: Abramson discloses that at least one of the second bus devices sends a request signal of asking use of the bus channel to the bus arbitrator through the at least one third pin of the bus interface extender, and the request signal asking for use of the bus channel is arbitrated by the bus arbitrator (column 7, lines 20-30).

Referring to claim 7: Claim is rejected as the same argument for claim 2.

Referring to claim 8: Claim is rejected as the same argument for claim 3.

Referring to claim 9: Claim is rejected as the same argument for claim 4.

Referring to claim 10: Claim is rejected as the same argument for claim 2.

Referring to claim 11: Claim is rejected as the same argument for claim 5.
Referring to claim 12: Claim is rejected as the same argument for claim 3.
Referring to claim 13: Claim is rejected as the same argument for claim 4.
Referring to claim 14: Claim is rejected as the same argument for claim 2.
Referring to claim 15: Claim is rejected as the same argument for claim 5.
Referring to claim 16: Claim is rejected as the same argument for claim 3.
Referring to claim 17: Claim is rejected as the same argument for claim 4.
Referring to claim 18: Claim is rejected as the same arguments for claims 1 and 2.
Referring to claim 19: Claim is rejected as the same argument for claim 3.
Referring to claim 20: Claim is rejected as the same argument for claim 4.
Referring to claim 21: Claim is rejected as the same argument for claim 5.

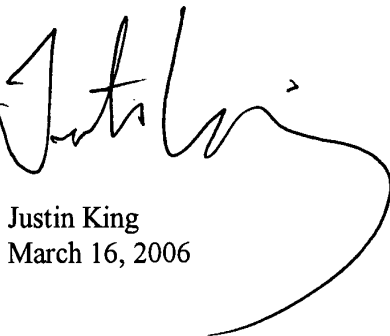
Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin I. King whose telephone number is 571-272-3628. The examiner can normally be reached on Monday through Friday, 9:00 am to 5:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on 571-272-7079 or on the central telephone number, (571) 272-2100. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Lastly, paper copies of cited U.S. patents and U.S. patent application publications will cease to be mailed to applicants with Office actions as of June 2004. Paper copies of foreign patents and non-patent literature will continue to be included with office actions. These cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov), from the Office of Public Records and from commercial sources. Applicants are referred to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197 for information on this policy. Requests to restart a period for response due to a missing U.S. patent or patent application publications will not be granted.



Justin King
March 16, 2006



JOHN R. COTTINGHAM
PRIMARY EXAMINER